

NOVEMBER/DECEMBER 2025

**FEEL54A/CEEL54A — MEDICAL
ELECTRONICS**

Time : Three hours

Maximum : 75 marks

SECTION A — (10 × 2 = 20 marks)

Answer ALL questions.

1. What is the basic function of bio amplifier?
2. List out requirements in electrical model of heart?
3. What is meant by bio lead?
4. Expand ECG and EEG.
5. Write any two types of biological parameters.
6. How the rate is measured in respiration?
7. List some samples for the preparation of XRD.
8. Define laser.
9. What precaution is used in diathermy?
10. What are surgical function of diathermy machine?



SECTION B — ($5 \times 5 = 25$ marks)

Answer ALL questions.

11. (a) Write a note on biopotential.

Or

- (b) Explain the function of bioelectricity.

12. (a) Describe the function of lead configuration of ECG.

Or

- (b) Give an account on EMG.

13. (a) Detailed about PPG signal used to measure the respiration rate.

Or

- (b) Elaborate the device is used to measure heart beat.

14. (a) Write the uses of XRD in medical field.

Or

- (b) What is isotope? and explain the various isotope used to detection the diseases of human part.

15. (a) Write a short note on ultrasonic diathermy.

Or

- (b) Enumerate the electrosurgery technique in diathermy unit.

SECTION C — ($3 \times 10 = 30$ marks)

Answer any THREE questions.

16. Elaborate the function of biological signal in medical diagnosis.

17. Differentiate between ERG and EOG.

18. Illustrate the working of plethsmographic technique.

19. Explain the uses of therapeutic proteins.

20. Explain the different irrigation techniques in diathermy technique.

